

CLAIMS

1. A y-shaped gusset structure, made from hollow sections, of a support frame for vehicles

characterised in that

the gusset structure comprises two hollow sections (1, 2), of which the first hollow section (1) comprises at least one flat side and along its circumference has been cut through except for a web (1c) situated in the flat side, and has been bent open around this web (1c), and in that the face of the second hollow section (2) has been inserted into the facing ends (1a, 1b) of the first hollow section (1), which facing ends (1a, 1b) have been created by the process of cutting and bending-open, wherein the edge regions (1e) of the first hollow section (1) are integrally connected with the second hollow section (2).

2. The gusset structure according to claim 1,

characterised in that

the contours of the two hollow sections (1, 2) are adjacent to each other as far as possible without any gap.

3. The gusset structure according to claim 1 or 2,

characterised in that

the facing ends (1a, 1b) of the first hollow section (1) comprise protruding edge regions (1f) which adjoin the second hollow section (2).

4. The gusset structure according to any one of claims 1 to 3,

characterised in that

on the sides adjoining the flat side, at the positions where the first hollow section (1) has been cut, in each instance an essentially rectangular strip (1g) has been cut out symmetrically in relation to the separation cut.

5. The gusset structure according to claim 4,

characterised in that

the cut-out strip (1g) comprises rounded corners.

6. A method for producing a gusset structure according to claim 1,

characterised by

the following method-related steps:

- a) Cutting open the first hollow section (1) along its circumference except for a web (1c) situated in the flat side;

- b) Bending up the first hollow section (1), which has been partly cut open, around the web (1c) positioned in the flat side;
- c) Inserting the second hollow section (2) into the facing ends of the first hollow section (1), which ends have resulted from being cut and bent up; and
- d) Integral connection of the second hollow section (2) with the first hollow section (1) at its edge regions (1e).

7. The method according to claim 6,

characterised in that

before it is cut open, the first hollow section (1) is given an outward bulge (1x) around part of its circumference, and in that the separating cut is made through the middle of said outward bulge (1x).

8. The method according to claim 7,

characterised in that

the outward bulge (1x) is made in the first hollow section (1) by interior high-pressure metal forming.

9. The method according to claim 6,

characterised in that

the cutting open of the first hollow section (1) takes place by laser beam cutting.

10. The method according to claim 6,

characterised in that

the hollow sections (1, 2) are connected by welding or soldering.

11. The method according to claim 10,

characterised in that

welding or soldering is carried out using laser beam technology.